What Is Claimed Is:

1. A fuel injector having a piezoelectric or magnetostrictive actuator (4), which activates a valve-closure member (17) cooperating with a valve-seat surface (18) to form a sealing seat; and having a hydraulic coupler (7), which includes a master piston (9), a slave piston (10) and a coupler volume (23) formed in-between, the master piston (9) and the slave piston (10) being axially displaceable with respect to each other and the coupler volume (23) being connected to a compensating chamber (12) via a throttle (24); a flexible section (13) at least partially delimiting the compensating chamber (12), and the coupler volume (23), the throttle (24) and the compensating chamber (12) being filled with a hydraulic medium,
wherein at least one spring element (33) directly or indirectly exerts pressure on the flexible section (13) from outside the coupler volume, via fixed components.

2. The fuel injector as recited in Claim 1,
wherein the flexible section (13) has an axial section (51) that extends axially with respect to the travel direction of the pistons (9, 10), and a radial section (47) that extends radially with respect to the travel directions of the pistons (9, 10).

3. The fuel injector as recited in Claim 1 or 2,
wherein the flexible section (13) has the shape of a perforated disk and/or sleeve.

4. The fuel injector as recited in one of the preceding claims,
wherein the flexible section (13) is elastic and made of an elastomer, in particular.

5. The fuel injector as recited in one of the preceding claims,
wherein the at least one spring element (33) has a helical form.

6. The fuel injector as recited in one of the preceding claims,
wherein the spring element (33) is braced on the master piston (9).

7. The fuel injector as recited in Claim 6,
wherein the spring element (33) is braced on the master piston (9) via a sleeve-shaped holder (41), which is fixed in place on the master piston (9) in an immovable manner.

8. The fuel injector as recited in one of the preceding claims,
wherein the spring element (33) acts on the flexible section (13) via an intermediate ring (44).

9. The fuel injector as recited in one of the Claims 1 through 5,
wherein the spring element (33) is braced on the slave piston (10).

10. The fuel injector as recited in Claim 9,
wherein the spring element (33) is braced on a flange (48), which is connected to the slave piston (10) in an immoveable manner, the flange (48) being situated in the region of the end of the end of the slave piston (10) facing away from the coupler volume (23).

11. The fuel injector as recited in one of the preceding claims,
wherein the spring element (33) acts via a sleeve ring (50), which has the form of a disk in the radial

extension and the form of a sleeve on the outside in the axial extension.

12. The fuel injector as recited in one of Claims 1 through 4,
wherein the spring element (33) is annular.

13. The fuel injector as recited in Claim 12,
wherein the spring element (33) is open, the ends overlap, and the ends are rounded.

14. The fuel injector as recited in Claim 12 or 13,
wherein the spring element (33) extends radially around the flexible section (13).

15. The fuel injector as recited in one of the preceding claims,
wherein the spring element (33) is made of steel, in particular spring steel.

16. The fuel injector as recited in one of the preceding claims,
wherein the spring element (33) exerts no pressure on the flexible section (13) in the unloaded state of the coupler (7).

17. The fuel injector as recited in one of the preceding claims,
wherein the throttle (24) includes a throttling ball (39), which is guided by a throttling gap (37) in an opening (36).

18. The fuel injector as recited in Claim 17,
wherein the throttling ball (39) is braced on a surface of the master piston (9) delimiting the coupler volume (23).